

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for controlling an operating point of a transistor of a power amplifier for amplifying a time division multiplex (access) TDM(A)-signal comprising a plurality of data time slots and a plurality of null power time slots, the method comprising:

detecting a deviation between a set operating point and an actual operating point of ~~said~~ the transistor, the actual operating point is detected using a shunt of the power amplifier connected in series to a drain-source path or a collector-emitter path of the transistor for providing a measurement voltage, a constant component of which representing the actual operating point of the transistor;

detecting occurrence of ~~said the~~ null power time slots using a controlling unit of the power amplifier; and

adjusting a bias of a gate of ~~said the~~ transistor using the controlling unit, according to ~~said the~~ deviation in order to re-establish ~~said the~~ set operating point;

wherein each of the detecting the deviation, the detecting the occurrence, and the adjusting the bias ~~are-is performed during at least two separate at a different~~ null power time slots ~~slot of said the~~ TDM(A)-signal.

2. (currently amended): The method according to claim 1, further comprising checking a result of the adjusting the bias at another null power time slot.

3. (previously presented): The method according to claim 1, wherein the null power time slots occur consecutively or non-consecutively.

4. (previously presented): The method according to claim 1, wherein the adjusting the bias is carried out iteratively during several control loops.

5. (previously presented): The method according to claim 1, wherein the set operating point is adapted in response to a temperature in a surrounding of the transistor.

6. (previously presented): The method according to claim 1, wherein the bias is a voltage applied to the gate for driving the gate of the transistor.

7. (currently amended): ~~The method according to claim 1.~~ A method for controlling an operating point of a transistor of a power amplifier for amplifying a time division multiplex (access) TDM(A)-signal comprising a plurality of data time slots and a plurality of null power time slots, the method comprising:

detecting a deviation between a set operating point and an actual operating point of said the transistor, the actual operating point is detected using a shunt of the power amplifier connected in series to a drain-source path or a collector-emitter path of the transistor for providing a measurement voltage, a constant component of which representing the actual operating point of the transistor;

detecting occurrence of said the null power time slots using a controlling unit of the power amplifier; and

adjusting a bias of a gate of said the transistor using the controlling unit, according to said the deviation in order to re-establish said the set operating point;

wherein the detecting the deviation, the detecting the occurrence, and the adjusting the bias are performed during at least two separate null power time slots of said TDM(A)-signal,

wherein the controlling the operating point of the transistor is ~~done~~started after the transistor has reached a steady state with respect to a temperature surrounding the transistor after a switch-on of the power amplifier.

8. (previously presented): The method according to claim 7, wherein the controlling the operating point is started after three of the null power time slots have occurred.

9. (previously presented): A computer readable recording medium having recorded thereon a program for executing the method of claim 1.

10. (canceled)

11. (currently amended): A power amplifier for amplifying a time division multiplex (access) TDM(A)-signal in a TDM(A) system, the TDM(A)-signal comprising a plurality of data time slots and a plurality of null power time slots, the power amplifier comprising
a transistor for amplifying ~~said the~~ TDM(A)-signal;

a shunt connected in series to a drain-source path or a collector-emitter path of ~~said the~~ transistor for providing a measurement voltage, a constant component of which representing an operating point of ~~said the~~ transistor; and

a controlling unit for detecting a deviation between a set operating point and ~~said the~~ operating point, for detecting occurrence of the null power time slots within ~~said the~~ TDM(A)-signal and for adjusting a bias of a gate of ~~said the~~ transistor according to ~~said the~~ deviation in order to re-establish ~~said the~~ set operating point,

wherein the controlling unit is embodied to carry out each of the detecting the deviation, the detecting the occurrence and the adjusting the bias ~~are performed during at least two separate~~ at a different null power time slots ~~slot of said the~~ detected null power time slots.

12. (currently amended): The power amplifier according to claim 11, wherein the controlling unit is a digital signal processor.

13. (canceled)

14. (canceled)

15. (canceled)

16. (currently amended): ~~The method of claim 1~~ A method for controlling an operating point of a transistor of a power amplifier for amplifying a time division multiplex (access)

TDM(A)-signal comprising a plurality of data time slots and a plurality of null power time slots,
the method comprising:

detecting a deviation between a set operating point and an actual operating point of said
the transistor, the actual operating point is detected using a shunt of the power amplifier
connected in series to a drain-source path or a collector-emitter path of the transistor for
providing a measurement voltage, a constant component of which representing the actual
operating point of the transistor;

detecting occurrence of said the null power time slots using a controlling unit of the
power amplifier; and

adjusting a bias of a gate of said the transistor using the controlling unit, according to said
the deviation in order to re-establish said the set operating point;

wherein the detecting the deviation, the detecting the occurrence, and the adjusting the
bias are performed during at least two separate null power time slots of said TDM(A)-signal,

wherein one of the at least two separate null power time slots occurs before one of the
data time slots, and another one of the at least two separate null power time slots occurs after the
one of the data time slots.

17. (currently amended):—The power amplifier according to claim 14 A power amplifier
for amplifying a time division multiplex (access) TDM(A)-signal in a TDM(A) system, the
TDM(A)-signal comprising a plurality of data time slots and a plurality of null power time slots,
the power amplifier comprising

a transistor for amplifying the TDM(A)-signal;

a shunt connected in series to a drain-source path or a collector-emitter path of the transistor for providing a measurement voltage, a constant component of which representing an operating point of the transistor; and

a controlling unit for detecting a deviation between a set operating point and the operating point, for detecting occurrence of the null power time slots within the TDM(A)-signal and for adjusting a bias of a gate of the transistor according to the deviation in order to re-establish the set operating point,

wherein the controlling unit is embodied to carry out the detecting the deviation, the detecting the occurrence and the adjusting the bias are performed during at least two separate null power time slots of said detected null power time slots,

wherein one of the at least two separate null power time slots occurs before one of the data time slots, and another one of the at least two separate null power time slots occurs after the one of the data time slots.

18. (new): A power amplifier for amplifying a time division multiplex (access) TDM(A)-signal in a TDM(A) system, the TDM(A)-signal comprising a plurality of data time slots and a plurality of null power time slots, the power amplifier comprising

a transistor for amplifying the TDM(A)-signal;

a shunt connected in series to a drain-source path or a collector-emitter path of the transistor for providing a measurement voltage, a constant component of which representing an operating point of the transistor; and

a controlling unit for detecting a deviation between a set operating point and the operating point, for detecting occurrence of the null power time slots within the TDM(A)-signal and for adjusting a bias of a gate of the transistor according to the deviation in order to re-establish the set operating point,

wherein the controlling unit is embodied to carry out the detecting the deviation, the detecting the occurrence and the adjusting the bias during at least two separate null power time slots of said detected null power time slots, after the transistor has reached a steady state with respect to a temperature surrounding the transistor after a switch-on of the power amplifier.

19. (new): The power amplifier according to claim 18, wherein the controlling unit is embodied to carry out the detecting the deviation, the detecting the occurrence and the adjusting the bias during at least two separate null power time slots of said detected null power time slots, after three of the null power time slots have occurred.